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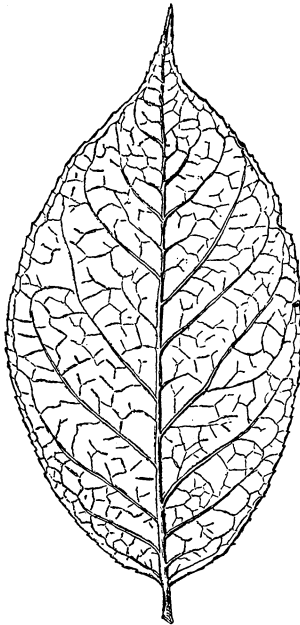
indicated, Mr. Meehan believed the atmospheric conditions, as regards shelter from wind or from drying atmospheric currents, must be very favorable to induce longevity under such circumstances. There seemed to be no reason why these trees might not reach the full average duration of two hundred years, which he had before named as about the duration of most trees of the Eastern United States.

Prof. Sheaffer gave some instances indicating that the average might be higher than the figures he had offered.

Parasitism in Boschniakia glabra, E. Meyer.—Mr. MEEHAN exhibited a specimen of this Orobanchiaceous plant collected by him last summer, growing among alders in the track of the retreating Davidson Glacier, near Pyramid Harbor, lat. 59°, in Alaska, and remarked that the life-histories of this class of parasitic plants were but imperfectly known, and every new fact of interest. In the Yosemite Valley last year, with Mr. John M. Hutchings and Dr. Charles Schäffer, of the Academy, they had carefully dug out masses of earth with the snow plant of the Sierras, *Sarcodes sanguinea*, and then tenderly washed out every particle of earth in a stream near by. There was not the slightest sign of attachment to any root, and no root of anything to be found in the mass of earth. There were not even the slightest remains of any dead vegetation which could suggest that the plant was even a saprophyte, as was generally found in the case of *Monotropa uniflora*. There was nothing but a huge mass of coralline fleshy matter, out of which the inflorescence rose. The origin of this fleshy mass was yet the unsolved mystery. From analogy with the behavior of other plants, he was inclined to believe that there was some parasitic attachment in the early life of the plant, and that it stored up in this coralline mass enough nutrition in one season to support the inflorescence of another, and, after this was done, severed the connection, leaving no trace by the time the mass was large enough to support the heavy drain of the large and juicy inflorescence. In *Boschniakia*, something of this sort had evidently taken place. The plants were in an early flowering stage, and all, when drawn out of the ground, had a single thread-like root depending from the centre of the pseudo-bulbous base of the plant, as in the specimen exhibited. These threads, now hard and wood-like, broke off very easily at the time, and it did not occur to the collector that they might be alder roots, as the density of the substance might now suggest. The desire to botanize over as large a tract as possible in the six hours given by the commander of the ship, did not admit of time to dig down and ascertain directly whether these threads were alder roots, and in direct connection with the living alder plants; but it would be remarkable, if they should be alder roots, and the *Boschniakia* sessile on them, that the plants should all select roots of the same slender size, and so nearly

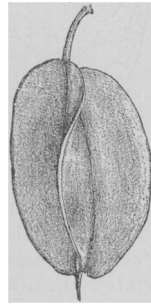
exactly alike as the twelve or eighteen specimens examined in this way indicated. Mr. Meehan stated that he had, in his *Flowers and Ferns of the United States*, series ii, vol. ii, p. 95, noted the existence of a similar thready attachment at the base of *Epiphegus Virginiana*, evidently connecting the plant with a foster-parent in early life—a fact since confirmed by Mr. Fergus, of West Chester, Pa.; and a fuller examination of these cases might afford the clue to all.

Variation in Halesia.—MR. MEEHAN exhibited dry leaves and fruit of *Halesia diptera*, *H. tetraptera*, and of a remarkable departure raised from the last-named species some years ago. This appeared in a bed of seedlings all raised from seed gathered



1. *H. tetraptera*.

from one tree growing in a garden in Germantown. It attracted attention when one year old by the leaves bearing a resemblance to those of an apple-tree. The parent tree had leaves narrowly lanceolate and acuminate, rather thin, pale green on the upper surface, and with no particularly prominent veins. The plant in question had broadly ovate leaves, scarcely pointed, very dark green and rugose on the upper surface, and strongly veined and hirsute below. It was planted to see what it would come to.



1a. *H. tetraptera*.

The flowers were open cup-shaped, instead of being drawn into a narrow tube at the base, as in the parent plant and the pistil was wholly enclosed and not exerted. For several years the plant was sterile, and many good botanists, whose attention was called to it, regarded the plant as a hybrid, and the sterility as a proof thereof. It seemed of no avail to point out that there was no other species with which the parent could have obtained pollen within many miles, nor to show that hybrids were not necessarily sterile. This season the plant produced fruit for the first time, some of which were now exhibited to the Academy. They are very small, not much over a quarter of an inch in diameter, and the four equal wings were comparatively large and of a strongly coriaceous character. The fruit which had been cut